

DOBRYANSKIY, A.F., RYBKINA, V.V.

Conversions of some disubstituted alkylbenzenes in the presence
of aluminosilicate catalysts. Trudy LTI no.51:76-82 '59.

(MIRA 13:8)

(Benzene)

GORLOVSKIY, S.I.; RYBKINA, V.V.

Flotation reagents in the U.S.A. Bul.tekh.-skop.inform.Gos.
nauch.-issl.inst.nauch. i tekhn.inform. 16 no.10:102-104 '63.
(MIRA 16:11)

DOBRYANSKIY, A. F., RYBKINA, V. V.

Comparing the effects of aluminum chloride and an aluminosilicate catalyst on halogenated benzenes. Trudy LTI no. 51:83-85 '59.
(MIRA 13:8)

(Benzene) (Catalysts)

GORLOVSKIY, S.I.; ZASHIKHIN, N.V.; MYAGKOVA, T.M.; RYBKINA, V.V.

Ore flotation with use of higher xanthates. Obeg. rud 7 no.3:5-12 '62.
(MIRA 164)

(Flotation)

Rybkina, V. V.

137-1957-12-23030

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 23 (USSR)

AUTHOR: Rybkina, V. V.

TITLE: On the Collecting Action of Mercaptobenzothiazole (O sobiratel'nom deystvii merkaptobenzotiazola)

PERIODICAL: Obogashcheniye rud, 1957, Nr 1, pp 44-46

ABSTRACT: A presentation of the results of flotation experiments in the study of one of the water-soluble derivatives of the mercaptobenzothiazolsoda Captax (SC), prepared from mercaptobenzothiazole and caustic soda. Experiments were performed on smithsonite and on cerussite from the deposits of Yuzhnaya Darbaza. The flotation of cerussite by SC (consumption 0.03g/l) without preliminary sulfidization is almost as effective as the flotation of cerussite by xanthogenate with preliminary sulfidization. However, SC is more sensitive to increases in the pH of the pulp than the xanthogenate. In the flotation of smithsonite and malachite the SC is inferior to xanthogenate. Among the investigated sulfide minerals, galenite is readily susceptible to flotation by SC, whereas sphalerite is less effectively floated. Chalcocite is virtually unsuitable for flotation. It is recommended that the testing of mercaptobenzothiazole be performed on ores containing oxidized and sulfide minerals of Pb.

A. Sh.

Card 1/1

1. Metallurgy-USSR 2. Minerals-Flotation 3. Mercaptobenzothiazole-Applications

RYBKINA, V.V.

Preparation of "IM" flotation oil. Obog. rud 4 no.6:8-10 '59.

(MIRA 14:8)

(Flotation--Equipment and supplies)

S/081/60/000/015/010/014
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 199, # 61367

AUTHORS: Dobryanskiy, A.F., Rybkina, V.V.

TITLE: The Transformations of Some Bisubstituted Alkylbenzenes in the
Presence of Alumosilicate Catalysts ¹

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensovet, 1959, No. 51, pp. 76-82

TEXT: In the presence of alumosilicate catalysts and at temperatures of $\leq 250^{\circ}\text{C}$, dialkyl aromatic hydrocarbons with one phenyl ring are capable of transformations during an extended period. This transformation consists in the transfer of alkyl with the formation of a trisubstituted from a bisubstituted one. As a result of the transformation, monosubstituted benzenes are liberated. [✓]
The rate of the radical transfer depends on its magnitude. Isomerization of substitutes into meta-position takes place simultaneously with the reaction of radical disproportionation during the thermocatalytic transformations of bi-

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S/081/60/000/015/010/014
A006/A001

The Transformations of Some Bisubstituted Alkylbenzenes in the Presence of
Alumosilicate Catalysts

substitute alkylbenzenes. The amount of transformed initial substances in-
creases with a longer time and higher temperature of the experiments.

From the authors' summary

Translator's note: This is the full translation of the original Russian
abstract.

Card 2/2

RYBKINA, V.V., kand.khim.nauk.

Collecting effect of captax. Obog. rud 2 no.1:44-46 '57.

(MIRA 11:9)

(Benzothiazole) (Flotation)

RYBKINA, V.V.:

RYBKINA, V.V.: "Thermocatalytic transformation of arylalkyl hydrocarbons on an aluminum silicate catalyst". Leningrad, 1955. Min Higher Education USSR. Leningrad Order of Labor Red Banner Technological Inst. imeni Leningrad Soviet. (Dissertations for the Degree of Candidate of Chemical Sciences)

SO: Knizhnaya letopis' No 44, 29 October 1955. Moscow.

BERLIN, A. Ya.; URETSKAYA, G. Ya.; RYBKINA, Ye. I.

New type of disproportionation. Zhur. ob. khim. 30 no. 12: 4109-4110
D '60. (MIRA 13:12)

1. Institut eksperimental'noy i klinicheskoy onkologii Akademii
meditsinskikh nauk SSSR,
(Disproportionation)

CHERNOVA, N.G.; RYBKINA, Ye.I.; BERLIN, A. Ya.

Aryl- β -amino acids. Part No.4: V.M. Rodionov reaction with
some aryl aliphatic aldehydes. Synthesis of δ -[p-di(2-chloroethyl)
aminophenyl]- β -aminovaleric acid. Zhur. ob. khim. 34 no.7:
2129-2133 J1 '64 (MIRA 17:8)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN
SSSR.

GHISLINOVA, N.G.; RYBKINA, Ye.I.; BEZOLIN, A.Ya.

Synthesis of β -amino acids. Part 5: 6- β -[p-di(2'-chloroethyl)
amino-phenyl]ethyl-5,6-dihydropyrimidin-2-one. Zhur.org.khim. 1 no.3:598-
600 Mr '65. (MIRA 18:4)

1. Institut eksperimental'noy i klinicheskoy onkologii AMN SSSR.

5.3900

77411

SOV/79-30-1-72/78

AUTHORS: Uretskaya, G. Ya., Rybkina, Ye. I., Men'shikov, G. P.

TITLE: Synthesis of 6-Amino-7-Methylpurine Derivatives as Possible Antimetabolites

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 327-332 (USSR)

ABSTRACT: Several derivatives of 7-methylpurine were synthesized for future study of their antimetabolic action. The following compounds were synthesized and described: 2,6-dichloro-7-methylpurine (I), 7-methyladenine (II), 2-chloro-6-ethyleneimino-7-methylpurine (III), 2-chloro-6-monoethanolamino-7-methylpurine (IV), 2-chloro-6-diethanolamino-7-methylpurine (V), 6-diethylamino-7-methylpurine (VI), 6-monoethanolamino-7-methylpurine (VII), ethyl ester of N-(2-chloro-7-methylpurine-6-glycine (VIII), ethyl ester of N-(2-chloro-7-methylpurine-6)-dl- α -alanine (IX), and ethyl ester of N-(7-methylpurine-6)-glycine (X). Compound I was prepared by the modified method of J. Davell for preparation of

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Synthesis of 6-Amino-7-Methylpurine Derivatives as Possible Antimetabolites

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trichloropurine (J. Am. Chem. Soc., 73, 2937 (1951)): freshly distilled phosphoryl chloride was boiled with theobromine and dimethylaniline; the residue left after distillation of POCl_3 was neutralized with Na_2CO_3 and the precipitate washed with 2% KOH and recrystallized from water (yield 25%; mp $197.5-196^\circ$). Compound III was made by letting the mixture of ethyleneimine, 2,6-dichloro-7-methylpurine, and 1% NaOH stand for 18-20 hr at room temperature. 2-Chloro-6-aminosubstituted 7-methylpurines (compounds IV, V, VIII, and IX; see Table A) were synthesized by boiling the alcohol solution of compound I with the corresponding amine. The 6-aminosubstituted 7-methylpurines (compounds II, VI, and X) were obtained by the modified method of E. Fischer (Ber., 30, 2400 (1897); *ibid*, 31, 104 (1898)), i.e., by boiling 2-chloro-6-aminosubstituted 7-methylpurine with HI (d 1.50) and red phosphorus. Melting points of the products were: 7-methyladenine (II), $345-346^\circ$; 6-diethylamino-7-methylpurine hydrochloride (VI), $200.5-201.5^\circ$; hydrochloride of ethyl N-(7-

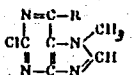
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Synthesis of 6-Amino-7-Methylpurine Derivatives as Possible Antimetabolites

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Table A. 2-Chloro-6-aminosubstituted 7-methylpurines.



R	EMPIRICAL FORMULA	MELTING POINT	SOLVENT FOR RECRYSTAL- LIZATION	YIELD (%)	FOUND(%)			CALCULATED(%)		
					C	H	Cl	C	H	Cl
NCH ₂ CH ₂ OH ₂	C ₁₀ H ₁₁ O ₃ N ₃ Cl	175°	Alcohol	56	44.33	5.32	13.04	44.19	5.20	13.06
HNCH ₂ CH ₂ OH	C ₉ H ₁₀ ON ₃ Cl	216-217	Alcohol		42.43	4.40	15.95	42.17	4.45	15.65
HNCH ₂ COOC ₂ H ₅	C ₁₀ H ₁₂ O ₃ N ₃ Cl	210	Water	75.5	44.25	4.42	13.01	44.53	4.48	13.14
HNCH-COOC ₂ H ₅	C ₁₁ H ₁₁ O ₃ N ₃ Cl	70-71	Water	50.5			12.61			12.50
CH ₃	C ₁₁ H ₁₀ O ₃ N ₃ Cl				43.45 43.74	5.45 5.37		43.78	5.40	

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methylpurine-6)-glycinate (X), 217-218^o(decomp.). The latter compound was also obtained (very small amount) by reacting 6-chloro-7-methylpurine with ethyl glycinate. Compound VII was prepared by reacting ethylene oxide with a solution of 7-methyladenine in 25% acetic acid. Biological action of compounds III, V, VII, II, VI, and X was studied in the laboratory of experimental chemotherapy. Results of these tests will be published separately. There is 1 table; and 5 references, 2 German, 3 U.S. The U.S. references are: J. Davell, J. Am. Chem. Soc., 73, 2937 (1951); R. Adams, F. Whitmore, J. Am. Chem. Soc., 67, 127 (1945); R. Prasad, R. Robins, J. Am. Chem. Soc., 79, 6401 (1947).

SUBMITTED: December 17, 1958

Card 4/4

RYBKINA, Ye.N.

Results of the control of child mortality under rural conditions in
the Ukrainian SSR. *Pediatrics* 38 no. 3:77-80 Mar '60. (MIRA 14:1)
(INFANTS—MORTALITY) (UKRAINE—PUBLIC HEALTH, RURAL)

RYBKINA, Yekaterina Nikolayevna [Rybkina, K.M.]; REVUTSKAYA, Z.G.
[Revuts'ka, Z.H.], otv.red.; SPAROSTENKO, T.M., red.

[How to bring up a healthy child] Iak vykhovaty zdorovu dytym.
Kyiv, 1960. 33 p. (Tovarystvo dlia poshyrennia politychnykh i
naukovykh znan' Ukrain's'koi RSR. Ser.5, no.10)

(MIRA 14:1)

(CHILDREN--CARE AND HYGIENE)

AKKERMAN, F.M., inzh.; PYATETSKIY, G.Yu., inzh.; RYBKO, B.P., inzh.

Standardization of current conducting binding posts of explosion-
proof electrical equipment. Elektrotehnika 35 no.2:16-17 F '64.
(MIRA 17:3)

LYBKO, Ye.N.; SEMEYKOVA, O.K.

Cleaning compounds of alkylaryl sulfonate-type from liquid
paraffins of the fraction of 180 to 325° of Polina oil. Dokl.
1981, 5 no. 1/2:82-87, 63. (MIRA 17:61)

RYBKO, Ye. N.

low pour-point fuels from Delta oil. Dokl. MI 5 no. 12:
88-91 '63. (MIRA 17:6)

RYBKULOVA, N.M.; GELLER, B.E.; PAKSHVER, A.B.

Investigation of the darkening mechanism and methods of bleaching spinning solutions and nitron fibres. Izv.vys.ucheb.zav.; khim. i khim.tekh. 1 no.5:107-113 '58. (MIRA 12:2)

1. Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti i Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

(Nitron)

(Acrylonitrile)

5(1, 3)

OCV/153-58-5-18/28

AUTHORS:

Rybkulova, N. M., Geller, B. E., Pakshver, A. E.

TITLE:

Investigation of the Mechanism of Darkening and of the Decoloring Methods of Spinning Solutions and of the "Nitron" Fiber (Issledovaniye mekhanizma potemneniya i metodov obestavechivaniya pryadil'nykh rastvorov i volokna "nitron")

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 107-113 (USSR)

ABSTRACT:

Synthetic chemical fibers should have a uniform color. In the production of polyacrylonitrile fibers, especially of the "Nitron" fiber 15-16% spinning solutions of polyacrylonitrile (PAN) in dimethyl formamide (DMF) can have colors from light yellow to dark brown. This is caused by the stability of the polymer, the quality of the solvent and other factors. The color of the fiber depends on that of the spinning solution. The problem of producing white fibers has been many times discussed in publications (Refs 1-10). The present paper serves the purpose of explaining the causes of the phenomena of colors of concentrated solutions of PAN in DMF, as well as in the ready fiber. Furthermore production methods of white fibers

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SOV/153-59-5-18/28

Investigation of the Mechanism of Darkening and of the Decoloring Methods of Spinning Solutions and of the "Nitron" Fiber

were to be devised. PAN, PAN solutions in DMF, films and fibers were investigated. Tables 1 and 2 as well as figures 1-4 give the results obtained. Since spinning solutions as well as freshly formed fibers become yellow or dark on a longer heating to 100°C it must be assumed that DMF is saponified in an aqueous medium. Colored amidine compounds are formed by the interaction of the separated dimethyl amine and ammonia with the polymer (-CN-groups). This assumption was proved by 3 facts experimentally checked (Figs 3, 4). The causes are admixtures in DMF, as there are H-COOH, NH₃ and (CH₃)₂NH. The substances of basic character present in the spinning solution lead to a darkening, those of acid character brighten the solution. Acids forming compounds with ammonia and amines and which are capable of entering reactions with -CN-groups are an exception. A scheme of the mechanism of this reaction was suggested. Production methods of the white polyacrylonitrile fibers was devised. The authors recommend usage of a) a pure solvent, as well as substances that bind dimethyl amine and ammonia to a non volatile solid compound, and which are incapable of reacting with the

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SOV/153-58-5-18/28
Investigation of the Mechanism of Darkening and of the Decoloring Methods
of Spinning Solutions and of the "Nitron" Fiber

-CN-groups of the polymer. They are H_2SO_4 , SO_2 , $H_2C_2O_4$ and others. b) To carry out an acid treatment of the ready fiber with weak acid solutions, and c) to bleach the ready fiber with acid solutions of sodium chlorite. There are 4 figures, 2 tables, and 15 references, 11 of which are Soviet.

ASSOCIATION: Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti i vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (All-Union Correspondence Institute for Textile and Light Industry, and All-Union Scientific Research Institute for Synthetic Fibers)

SUBMITTED: January 11, 1958

Card 3/3

RYBLKO, I.

Study of the materials of the Twentieth Congress of the Communist
Party of the Soviet Union. Prof.-tekh. obr. 14 no.4:24-26 Ap '57.
(MLRA 10:4)

1. Rukovoditel' sektsii prepodavateley politicheskikh distsiplin
pri Kiyevskom metodicheskoy kabinete.

(Kiev--Communist education)

✓ Reflex stimulation of respiration by dicholine ester of
suberic acid. I. V. Dardydov and R. S. Ryblovsk (1st
I. P. Pavlov Med. Inst., Leningrad). *Byull. Eksp. Biol.
& Med.* 40, No. 11, 41-4 (1955).—Dicholine substrate in-
jected intravenously has L.D.₅₀ of 1 mg./kg. for cats. It
shows a pressor effect beginning with 0.0008 mg./kg. dose
and stimulates respiration beginning with 0.001-0.002 mg./
kg. Intramuscular or subcutaneous administration at 0.1-
0.5 mg./kg. strongly and durably stimulates respiration and
under this method the drug has L.D.₅₀ 4 mg./kg. for cats.
It stimulates respiration that had been suppressed by nar-
cotics (EtO and Hexenal also morphine). In healthy
human subjects the drug also stimulates respiration after
intravenous administration of 0.5 ml. 0.2% soln.; the air
intake rises to 200-500% of normal, with moderate rise in
blood pressure, but even at 0.3 mg./kg. it shows no toxic
effects. At the latter dosage, subcutaneous administration
to human subjects also stimulates respiration lasting over 20
min. with rise in blood pressure of 20-50 mm. Hg. The
drug can be used repeatedly with the same physiol. effect.
G. M. Kosolapoff

2

RYBNICEK, Bohumil

Centralized collection of payments in practice. Cs spoje 10
no.2:8-9 Ap '65.

1. South Moravia Regional Administration of Telecommunication,
Brno.

RYBICEK, K.

"A few remarks on the utilization of the peat bog near Velke Darko."

P. 260. (Ministerstvo kultury. Statni prace o ochranu prirody --Praha, Czechoslovakia.)
Vol. 12, no. 9, Dec. 1957.

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

RYBNIKAR, Andrzej

Stamping plates with permanent magnets. Stroj vyr 12
no. 10/746-347 0.164.

1. Narodni National Enterprise, Plant Hulin.

RYBNIKAR, Antonin

Saw disks with SK carbide tips for woodworking and machining
of new plastics. Stroj vyr ll no. 12: 619 '63.

1. Naradi, n.p., zavod Hulin.

RYBNIKAR, Antonin

"Metal cutting by saws" by B. Dobrovolny. Reviewed by Antonin
Rybnikar. Stroj vyr ll no.6:323 Je '63.

RYBNÍKAR, FRANTIŠEK

CZECHOSLOVAKIA / Physics of High Molecular Substances.

D-9

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9120

Author : Rybníkar, František

Title : Viscosimetry of Poly-amides.

Orig Pub : Chem. listy, 1955, 49, No 10, 1442 - 1447

Abstract : Description of a method of fractionating poly-amides, dissolved in a benzol-creosol mixture, by precipitating with benzene. Various specimens of fractionated and non-fractionated poly-amides were used to check the suitability of the Huggins equation (Huggins, M.L., Industrial Engineering Chemistry, 1943, 35, 980) and to determine the constant $k = 0.335$ for tri-cresol at 30° all the way to $\eta = 10$. For the characteristic of individual fractions of poly-amides, the author proposes the use of only the characteristic viscosity, determined for the poly-amide in the tri-cresol in accordance with the equation $[\eta] = (\sqrt{1 + 1.34\eta_{sp}/c} - 1) / 0.67c$

Card : 1/2

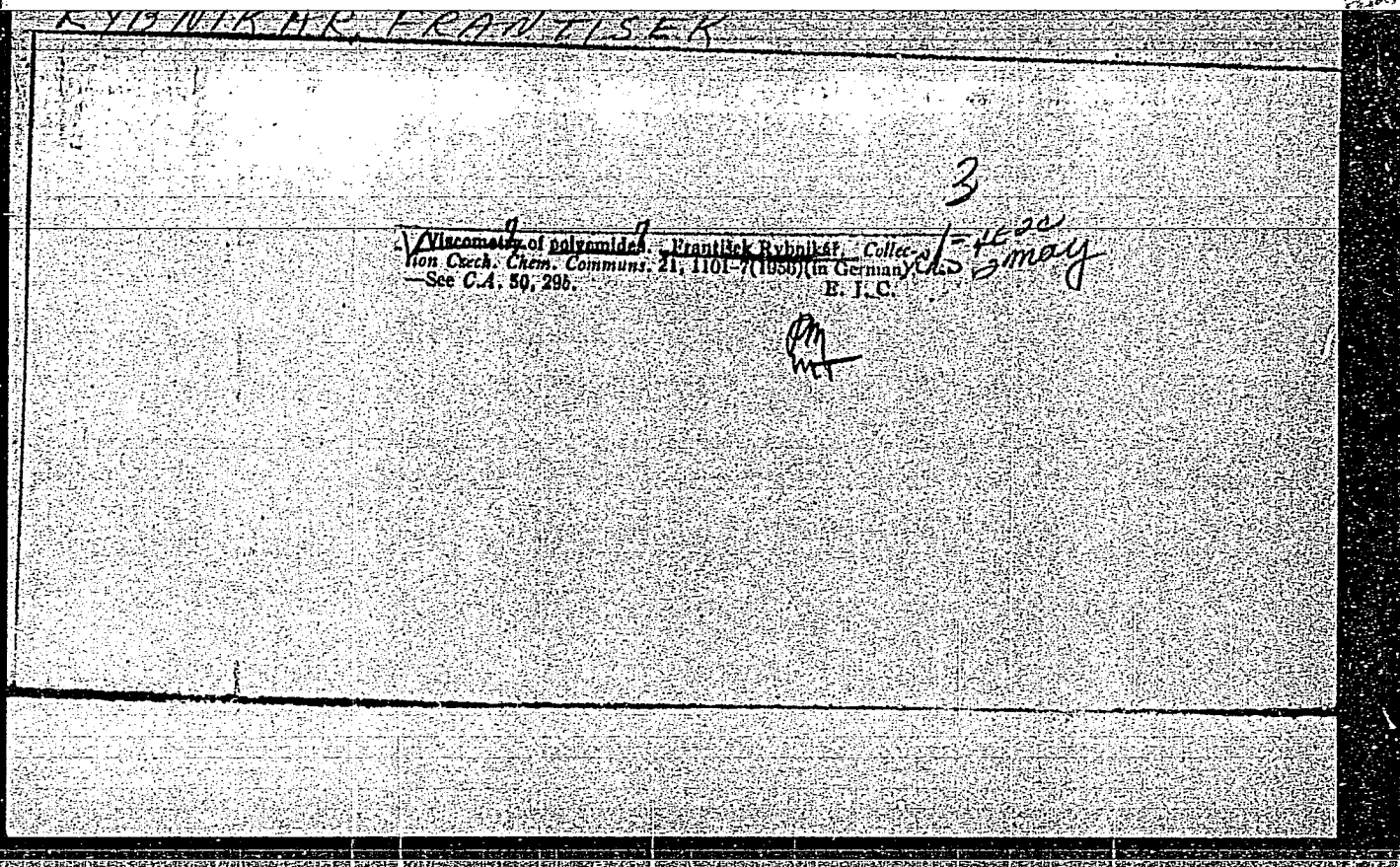
CZECHOSLOVAKIA / Physics of High Molecular Substances.

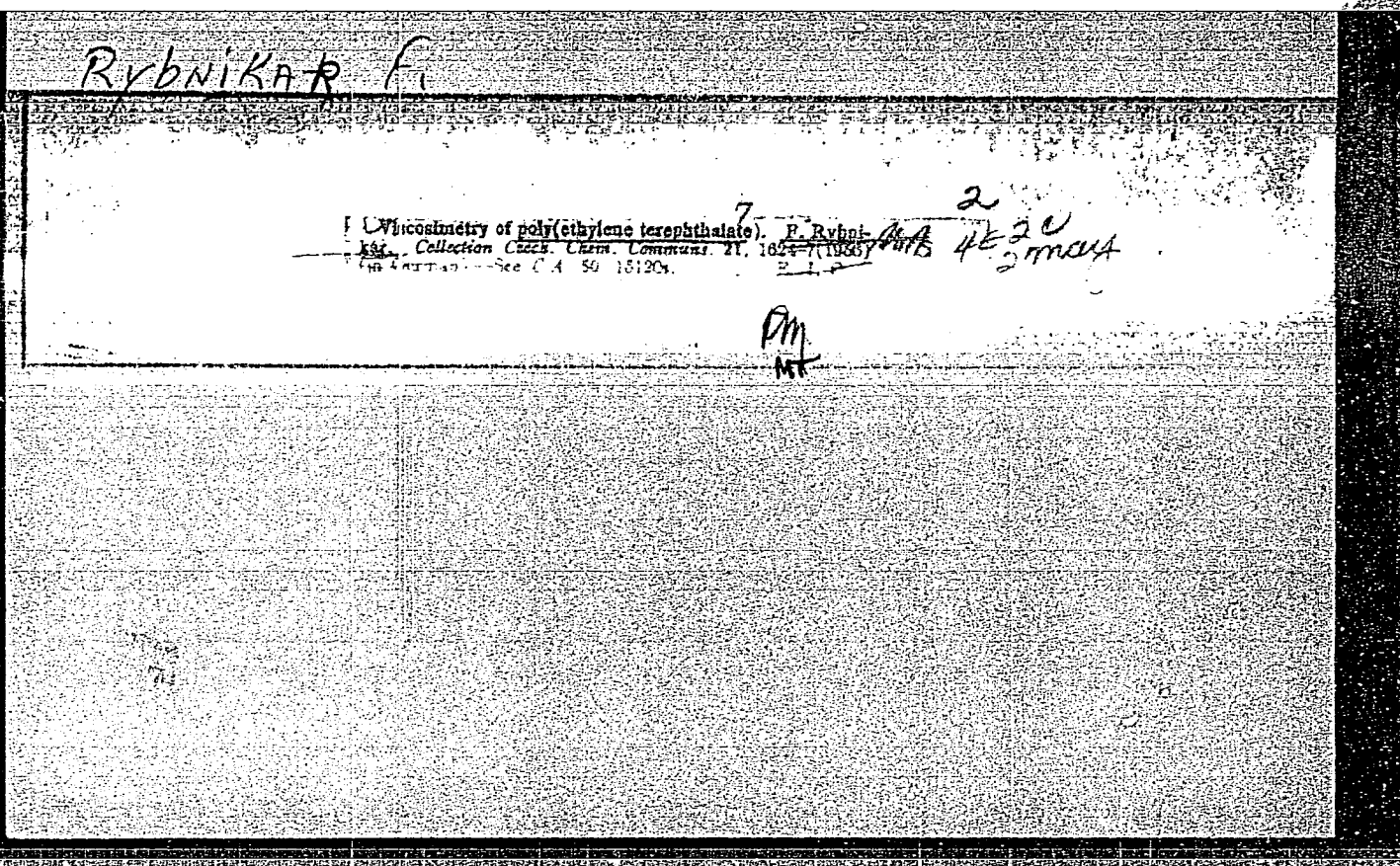
D-9

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9120

Abstract : instead of the previously employed degree of polymerization. The degree of polymerization is only a particular characteristic of the viscosity and varies with the equation used for its determination, all the way to several tens of percent.

Card : 2/2





RYDNI KHK, P.

✓ Fractionation of poly(ethylene terephthalate). R. Rybní-
kát. Collection Czech. Chem. Commun. 21, 1627-30 (1956)
(in German). See C.A. 50, 16121b.

2

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RYBNÍKAŘ, F

CZECHOSLOVAKIA / Physics of High Molecular Substances.

D-9

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9106

Author : Rybníkař, F.

Title : ~~Objective~~ Method for Determining the Melting Point and the Softening Region of High Molecular Substances.

Orig Pub : Chem. listy, 1956, 50, No 1, 145 - 146

Abstract : A blunt needle, connected with an indicator (pointer micrometer) bears against the surface of the investigated substance, placed in a heated test tube. Upon softening or melting of the substance, the needle starts to move downward under the influence of its own weight and of the indicator spring. The motion of the needle is measured by the indicator.

Card : 1/1

RYBNÍKAR, F.

700-11
Fractionation of poly(ethylene terephthalate). F. Rybní-
kár (Výzkumný ústav plast. hmot, Gottwaldov, Czech.).
Chem. Zpr. 30, 1190-2 (1953). Fractionation of poly-
(ethylene terephthalate) was carried out with ligroine b.
above 100° from a soln. in PhOH-C₆H₅Cl 1:3. Integral
and differential distribution curves are given. M. Hudlický

pm

RYBNÍKAR, F. ; ZAJÍČEK, O.

Laboratory preparation of high molecular weight poly-6-caprolactam.

P. 619. (CHEMICKÝ PRŮMYSL) (Praha, Czechoslovakia) Vol. 7, no. 11, Nov. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

RYBNIKAR, F.

"Objective determination of the melting and softening points in substances with a high molecular weight. In Russian."

p. 309 (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK
CHECKHOSLOVATSKIKH KHMICHESKIKH RABOT. -- Praha, Czechoslovakia.)
Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

RYBNÍKAR, F.

"Viscometry of polyamides"

Chemické Listy. Praha, Czechoslovakia. Vol. 49, no. 10, Oct 1955

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

RYBNIKAR F.

CZECHOSLOVAKIA

RYBNIKAR, F.

Research Institute of India Rubber and Synthetics Technology
(Forschungsinstitut für Kautschuk- und Kunststofftechnologie), Gottwaldov

Prague, Collection of Czechoslovak Chemical Communications,
No 12, 1963, pp 3226-3237

"Recrystallization of Isotactic Polypropylene."

RYBNIKAR, F.

Course of the liquefaction of polychlorotrifluoroethylenes. Coll
Cz Chem 27 no.12:2864-2871 D '62.

1. Forschungsinstitut für Kautschuk- und Kunststofftechnologie,
Gottwaldov.

RYBNIKAR, F.

Melting temperature of polypropylenes. Coll Cz Chem 28
no.2:320-330 F '63.

1. Forschungsinstitut für Kautschuk- und Kunststofftechnologie,
Gottwaldov.

L 19152-63 EWP(j)/EFF(c)/BDS AFFTC/ASD Pc-L/Pr-L RM/WW/MAY

ACCESSION NR: AP3002592

G/0004/63/010/006/0324/0330

AUTHOR: Rybníkar, F., Mozisek, M., Jelinek, O.

TITLE: Effects of radiation on the structure and properties of isotactic polypropylene

SOURCE: Plasto und Kautschuk, v. 10, no. 6, 324-330

TOPIC TAGS: isotactic polypropylene, radiation effect, plastics crystallinity, polypropylene structure, polypropylene property polymer

ABSTRACT: Isotactic polypropylene was irradiated in vacuo and in air, at a temperature of $20^{\circ} \pm 5^{\circ}$ C, with gamma rays emanating from a Co-60 source at a dosage intensity of 14 rad/sec. The absorbed dose was measured with a Fe(II) sulfate dosimeter. The irradiated samples were heat-treated at 90° C for 48 hr. and examined by X-ray spectrography (CuK-alpha), for melting point, solubility and swelling in xylene, density, mechanical properties, spherulite growth rate, and isothermal crystallization. Irradiation in air caused an oxidative decomposition, characterized principally by a decrease in cross-linking yield, resulting in a significant deterioration in mechanical properties. Irradiation

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L 19152-63

ACCESSION NR: AP3002592

in vacuo, at a dose below 3×10^7 rad, caused a splitting of the macromolecules to split off. At higher doses, progressive increase in cross-linking of the macromolecules and the formation of an insoluble component became evident. The melting point decreased after irradiation in vacuo; crystallization rate first decreased and, at doses over 1.2×10^7 rad, increased. The increase was attributed to an increase in the number of preferred crystallization nuclei. The rate of spherulite growth was not affected by irradiation. Crystallization isotherms are shown in Figure 1 of Enclosure 1; relations between crystallization and radiation dose are shown in Figure 2 of Enclosure 2; some significant physical constants are shown in Table 1, Enclosure 3. This paper was translated by J. Techel, Radebeul. Orig. art. has: 13 diagrams and 4 tables.

ASSOCIATION: Research Institute for Rubber and Plastics Technology, Gottwaldow,
Czechoslovakia

SUBMITTED: 08Oct62

DATE ACQ: 16Jul63

ENCL: 03

SUB CODE: MA, CH

NO REF SCV: 000

OTHER: 010

Card 2/62

RYBNÍKAR, F.

CSSR

Research Institute for Caoutchouc and the Technology of Synthetics,
Gottwaldov

Prague, Collection of Czechoslovak Chemical Communications, No 12, 1962,
pp 2864-2871

"Process of Fusion of Polychlorotrifluorethylene"

RYBNIKAR, F.

Cristallization kinetics of polychlorotrifluorethylenes. Coll Cz
chem 27 no.10:2307-2325 0 '62.

1. Forschungsinstitut fur Gummi- und Kunststofftechnologie, Gottwaldov.

RYBNIKAR, F.

CZECHOSLOVAKIA

RYBNIKAR, F.

CSSR

Research Institute for Caoutchouc and Technology of Synthetics,
Gottwaldov

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963,
pp 320-330

"Melting Temperature of Polypropylenes"

RYENIKAR, F.

CZECHOSLOVAKIA

No academic degree indicated

Research Institute for Rubber and Synthetics Technology (Forschungsinstitut
fur Gummi- und Kunststofftechnologie), Gottwaldov

Prague, Collection of Czechoslovak Chemical Communications, vol 27, No 10,
Oct 62, pp 2307-2325.

"Kinetics of Crystalization of Polychlorotrifluorethylene"

53600

G/004/62/009/009/002/004
D029/D109

AUTHOR: Rybníkář, F.

TITLE: Influence of melting conditions on the crystallization of polychlorotrifluoro ethylene

PERIODICAL: Plaste und Kautschuk, vol 9, no. 9, 1962, 422-424

TEXT: The author discusses the results of experiments which will be published by him in another paper [Collect. czechoslov. chem. commun., being printed]. The appearing minimum value of the dependence of the $1/r$ values on the t values are thus explained: a short melting time leaves a big quantity of crystallization nuclei in the batch. Their number decreases with increasing melting time. In addition a decomposition phenomenon occurs which results in an increased total crystallization velocity. It could not be determined so far whether this increased velocity is due to a simple lowering of the molecular weight or to the fact that compounds or structural states are created which serve as crystallization nuclei or activators of the crystal formation. The dependence minimum shifts in direction of the longer melting time with increasing molecular weight. The crystalli-

Card 1/3

Influence of melting conditions on ...

G/004/62/009/009/002/004
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zation mechanism is determined by the n-values of Avram's equation, which for specimen 1 were around 3, proving a crystal formation of preferred nuclei. For specimen 2 the n-values were between 3 and 4. In this case also an athermic formation occurs. The crystallization of specimen 3 is greatly changed. Up to a melting time of 45 min. the n-values were around 3. In the initial phase of the isothermic crystallization they were around 2. In a later phase the mechanism is characterized by values a little under 3. The observed non-isokinetic crystallization is thus explained: the number of preferred crystallization nuclei decreases continually with the melting time. After some time the majority of the preferred nuclei does not reach the critical size necessary for the given crystallization temperature. A certain time is necessary for the nuclei to reach the critical size. The minimum melting temperature of the total crystallization velocity is around 250°C. There are qualitative differences in the structure of molten polychlorotrifluoro ethylene which depend on the temperature of the melting process. Observed changes in the crystallization mechanism are similar to those occurring in the analogous cases of melting times. There are 5 figures and 3 tables. JB

Card 2/3

RYBNIKAR, F.

Effect of temperature on crystallization rate of poly-6-caproamides.
Coll Cz Chem 26 no.4:937-944 Ap '61.

1. Forschungsinstitut für Gummi- und Kunststofftechnologie, Gottwaldov.

(Caproamide)

RYBNIKAR, F.

The dependability of crystallization rate of polyethylene terephthalate on temperature. Coll Cz Chem 25 no.6:1540-1544 Je '60.
(EEAI 10:9)

1. Forschungsinstitut fur Gummi- und Kunststoff-technologie, Gottwaldov.

(Ethylene terephthalate) (Polymers and polymerization)

RYBNÍKAR, F

Distr: 4E2c(j)

2-JA, T (NO) (MAY)

Viscometry of poly(6-caproamide). F. Rybníkář (Research Inst. Rubber and Plastics Technol., Gottwaldov, Czech.). *J. Polymer Sci.* 29, 519-30(1958).—Some problems of the viscometry of poly-6-caproamide (6-PA) are discussed, in particular the investigation of the influence of H₂O in tricresol, mol. wt., and temp. on the viscosity behavior of 6-PA solns. Thus, 6-caprolactam was subjected to polycondensation with 6-aminocaproic acid as catalyst at 250° under atm. pressure to give 6-PA. A tricresol fraction contg. 44% *m*-cresol was purified and chosen as the solvent for viscometry of 6-PA, employing Ubbelohde viscometers. The influence of H₂O content was studied with samples having values of $[\eta]$ 50, 100, and 300 ml./g. The $[\eta]$ decreases with increasing H₂O content of tricresol, the % lowering of $[\eta]$ being directly proportional to H₂O. In the concn. (*c*) range <0.0015 g./ml., the value of η_{sp}/c was found to increase with decreasing concn. of the soln. The influence of mol. wt. was investigated by measurements with fractionated and unfractionated 6-PA and its *N*-methoxymethyl deriv. at 25° in tricresol contg. 0.1% H₂O. Previous results were confirmed for higher values of $[\eta]$, however, the const. *K* increases with samples having low values of $[\eta]$. The relation of *K* to $[\eta]$ shows the limiting character of the const. *K*, being independent of $[\eta]$ only in higher values of $[\eta]$. The const. *K* was replaced by a function taking into consideration the influence of mol. wt. The following equation appears to be the most suitable: $K = K_1 + K_2/[\eta]^x$, where *K*₁ is the limiting value of *K* for high $[\eta]$, and *K*₂ is a new const.; *K*₁ = 0.26, *K*₂ = 285.5, and *x* = 1.48. For the detn. of temp. dependence of viscosity for a polymer-solvent system, the relation η_{sp}/c to *c* was measured with different samples of 6-PA having values of

$[\eta]$ 50-300 ml./g., at various temps. in tricresol and in 78.9% HCOOH. Results show that the measured value of $[\eta]$ for 6-PA decreases at higher temps., which decrease with temp. can be expressed by the relation $\log[\eta] = a/(T + b)$, where *a* and *b* are consta. characteristic of the given polymer-solvent system. The const. *a* is shown to be practically independent of $[\eta]$. Its value for tricresol solns. is 243, and for HCOOH the value is shown to be 188.

Arthur Lyem

Distr: 4E2c(j)

Crystallization of poly(ethylene terephthalate). E. Rybníček (Výzkumný ústav technol. kaučuku a umělých hmot, Gottwaldov, Czech.). *Collection Czechoslov. Chem. Commun.* 25, 1620-30 (1960). — The kinetics of the isothermal crystn. of the poly(ethylene terephthalate) was investigated by means of d. gradient tubes, by d. balance, and by microscopy. The results were compared with Avrami's equation (CA 34, 1233¹). The study of the effect of the thermal pre-treatment on the crystn. kinetics shows a significant influence of the melting time and melting temp. on the size and concn. of the thermal nuclei and of the nuclei that survive the melting. The microscopic measurements showed that the spherulites are spherical in form even in cases where the exponent in the Avrami's equation $n = 2$ is in contradiction to the theory. E. Reda

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2-7AJ(NB(MAY))

Distr: 4E2c(1)

✓ The temperature dependence of the crystallization rate of poly(ethylene terephthalate). F. Rybníček (Výzkumný ústav technol. kůže a umělých hmot, Gottwaldov, Czech.). *Collection Czechoslov. Chem. Commun.* 25, 1640-4 (1960).—The temp. dependence of the crystn. rate of poly(ethylene terephthalate) was compared with theoretical relations. It is not possible to det. safely whether or not the growth velocity is controlled by a secondary nucleation that takes place on the surface of the growing nucleus.

E. Erdős

3
2-JAJ(NB)UMAY

RYBNIKAR, F

Distr: 4E2c(j)/4E3b/4E3d

Secondary crystallization of polymers. F. Rybníkar
(Research Inst. Rubber-Plastics Technol., Bratislava,
Czech.). *J. Polymer Sci. A*, 517-22 (1969). -- At the end of
primary isothermal crystn., further structural changes occur
in polymers; they are called secondary crystn. and can be
measured by an increase in d . The phenomenon was in-
vestigated for such polymers as poly(ethylene terephthalate),
poly- ϵ -caproamide, polyethylene (low and high d), and
poly(chlorotrifluoroethylene). Ribbons of the polymers,
1.5 mm. thick, enveloped in bronze gauze, were held for 15
min. in an elec. heated crystn. bath. By plotting d . (meas-
ured by the d . balance method) vs. time (in min.) a set of
curves was established which consisted of 2 domains. The
1st part, due to primary crystn. can be defined by the Avrami
equation. At a point where this part of the curve flattens
out, a sudden upward turn occurs, followed by a step-wise
increase in d , approx. linear with log time. This region
belongs to secondary crystn. and it starts at a time equal to
the value of 2 half-times of primary crystn., i.e., the end of
this phase. Both phenomena are closely related but defi-
nitely distinct. George M. Sathelm

1-001 (201)
2-100 (201) (202)
3

RYBNIKAR, F.

Fusion temperatures of poly-6-caproamide and polyethylene terephthalate. In German. Coll.Cz.Chem. 24 no.9:2861-2869 S '59. (REAI 9:5)

1. Forschungsinstitut fur Gummi- und Kunststofftechnologie, Gottwald.

(Caproamide) (Ethylene) (Polymers and polymerization)

RYBNIKAR, F.

CZECHOSLOVAKIA/Atomic and Molecular Physics - Polymers and Their Solutions. D

Abs Jour : Ref Zhur Fizika, No 1, 1960, 999
Author : Rybnikar, F.
Inst : -
Title : Measurement of Heat of Transition by a Penetrometric Method
Orig Pub : Collect. Czechosl. Chem. Commun, 1959, 24, No 4, 1200-1205
Abstract : Translated from Chem. listy 1958, 52, 896.
See Referat Zhur Fizika, 1959, No 2, 3159.

Card 1/1

- 45 -

RYBNIKAR, F.

"Crystallization of polymers."

p. 212 (Chemie, Vol. 10, no. 3, Mar. 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9,
September 1958

CZECHOSLOVAKIA/High Polymer Chemistry.

I

Abstr Jour: Ref Zhur-Khim., No 3, 1959, 29806.

Author : Rybníkar, F.

Inst :

Title : Penetrometric Determination of the Transition
Temperature of Polymers.

Czech. Pub: Chem Listy, 52, No 5, 896-900 (1958) (in Czech)

Abstract: The author has investigated the dependence of the melting point of crystalline and amorphous polymers on the load in penetrometric tests. From the values obtained for poly-6-caproamide, polyethylene, polyethylene terephthalate, polyvinyl chloride, and polyvinyl butyraldehyde, the author has derived an equation correlating the value of the load with

Card : 1/2

RUBNIKAR, F.

CZECHOSLOVAKIA/Chemistry of High Molecular Substances.

I.

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 49222

Author : Frantisek Rybnikar, Otnar Zajicek

Inst : -

Title : Laboratory Preparation of Poly-6-Caprolactam with High Molecular Weight.

Orig Pub : Chem. prumysl, 1957, 7, No 11, 619-623

Abstract : A simple preparation method of high molecular poly-6-caprolactam (I) of 6-caprolactam (II) and of commercial poly-6-caproamide (III) by the method of thermal polycondensation in the presence of acid catalysts was developed. It was found that the polycondensation of II gave the best results, if it had been carried out in the duration of 2 hours under normal pressure and continued 4 hours more under the pressure of 1 to 2 mm of merc. column, and if orthophosphoric acid and 6-aminocaproic acid in the amounts of 0.01% and 10 to 15% of the

Card 1/2

24

RYBNIKAR, Frantisek

Density changes in secondary crystallization of polypropylene.
Chem prum 12 no.11:634-636 N '62.

1. Vyzkumny ustav gumarenske a plastikarske technologie, Gottwaldov.

DistrP 4E2c(j) 7

✓ Fusion of polycaproamide 6 and poly(ethylene terephthalate). Frantisek Rybníček (Výzkumný ústav gumárenské a plastické techniky, Gottwaldov, Czech.). Chem. listy 52, 1042-8 (1958).—The effects of copolymerization components, of end groups, and of solvents on the m.p. depression were studied. The heats of fusion computed according to Flory's theory (cf. F., *et al.*, C.A. 45, 8804e) are on the av.: 38.2 cal./g., for polycaproamide 6 and 1/1: 20.7 cal./g. for poly(ethylene terephthalate). B. Erdős.

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Rybníkar, František

Distr: 4E2c(j)

Measurement of the transition temperature of polymers by penetrometer techniques. František Rybníkar (Výzkumný ústav gumárenské plastické techniky, Gottwaldov, Czech.). Chem. listy 52, 896-900(1958).—Three temps. are distinguished: T_m , which corresponds to the melting of crystallites; T_f , which corresponds to the flowing of the amorphous phase; and T_g , which characterizes the glass-transition of the amorphous phase. The dependences of these temps. on the load used may be expressed empirically by: $T_m^0 - T_m = KP_m^a$; $1/(T_f - T_g) - 1/(T_f^0 - T_g) = KP_f^a$. The T_g value is independent of the load used. These relations were detd. for: poly- β -caproamids, polyethylene, poly(ethylene terephthalate), poly(vinyl chloride), and poly(vinyl butyral). E. Erdős

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1

927

RYENIKAR, J.

Reduction of the kinetic energy of water beneath hydraulic constructions by means of surface discharge. p.97. (Vodni Hospodarstvi. Praha. No. 4, Apr. 1957.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

RYBNIKAR, J.

Prokes, V.; Halek, V. Electric analogy in the hydrodynamics of ground water flowing under the foundations of buildings. p. 342. VODNI HOSPODARSTVI, Prague, Vol. 4, no.11, Nov. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

AUTHORS: Rybnikov, A.A. and Kirillov, I.F. SOV-25-58-9-34/62

TITLE: Branding Whales (Metki na kitakh)

PERIODICAL: Nauka i zhizn', 1958, Nr 9, p 66 (USSR)

ABSTRACT: The branding of whales was introduced in 1930. Its aim was to trace the origin of killed animals. Special rifles were used to shoot "marks" made of stainless steel into the backs of the whales. The site where this "branding" was done was marked on the map and the information transmitted to the Vsesoyuznyy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii (The All-Union Scientific Research Institute of the Fishing Industry and Oceanography) which transmitted this information to the international organization which regulates the whaling industry.

ASSOCIATION: Nauchnaya gruppa kitoboynoy flotillii "Slava" (The Scientific Group of the Whale Flotilla "Slava")

1. Whales--Migration

Card 1/1

Rybnikov, K.A.

44-1-38

TRANSLATION FROM: Referativnyy zhurnal, Matematika, 1957, Nr 1, p 4 (USSR)
AUTHOR: Rybnikov, K.A.
TITLE: Karl Friedrich Gauss; On the Centennial of his Death
(Karl Fridrikh Gauss; k stoletiyu so dnya smerti)
PERIODICAL: V sb.: Vopr. istorii yestestvozn. i tekhn., Nr 1,
Moscow, AN SSSR, 1956, pp 44-53
ABSTRACT: Bibliographic entry

Card 1/1

RYBNIKOV, A. A.

USSR/Physics of the Hydrosphere - General Problems, N-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36227

Author: Lagutin, B. L., Rybnikov, A. A.

Institution: None

Title: Preparation of Glasses for the Thermobathigraph

Original

Periodical: Meteorol. i gidrologiya, 1956, No 1, 52-53

Abstract: Several methods were tested for coating glasses for the thermobathigraph. It was established that the simplest and most reliable method is to smoke the glass, using the procedure described in the article.

Card 1/1

Ry B. N. KIV) A N

The production of higher esters. A. N. Rybnikov (Wood Chem. Plant, Dmitriev). *Gidroliz. i Lestokh. Prom.* 9, No. 4, 22-3(1956).—A method is described for the prepn. of higher RCO_2Bu from crude AcOH , contg. up to 10% of HCO_2H , PrCO_2H , $\text{Me}_2\text{CHCH}_2\text{CO}_2\text{H}$, and other acids, obtained from the wood-pulp industry. Residues from the continuous BuOAc process are combined with still bottoms from crude BuOAc rectification, and are completely butylated. The crude mixt. is then fractionally distd. Intermediate fractions are collected and refractionated.

Diomed M. Chern

Rybníkář, F.

✓1692* (German.) Viscosimetry of Polyamides. Zur viskosimetrie der polyamide. F. Rybníkář. *Collection of Czechoslovak Chemical Communications*, v. 21, Oct. 1956, p. 1101-1107. Study of polyamide fractionation.

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CZECHOSLOVAKIA/High Polymer Chemistry.

I

Abstr Jour: Ref Zhur-Khim., No 3, 1959, 29906.

Author : Rybníkar, F.

Inst :

Title : Penetrometric Determination of the Transition
Temperature of Polymers.

Orig Pub: Chem Listy, 52, No 5, 896-900 (1958) (in Czech)

Abstract: The author has investigated the dependence of the melting point of crystalline and amorphous polymers on the load in penetrometric tests. From the values obtained for poly-6-caproamide, polyethylene, polyethylene terephthalate, polyvinyl chloride, and polyvinyl butyraldehyde, the author has derived an equation correlating the value of the load with

Card : 1/2

Rybníkar, F.

✓ An objective method for the determination of melting
points and softening ranges of macromolecular compounds.
C. Rybníkar (Výzkumný ústav plastických hmot, Gott-
waldov, Czech.). Chem. Listy 50: 145-6(1956); cf. C.A.
49: 1480e. — An improved simple penetrometer is described.
B. Eridós

RYBNÍK, F.

✓ 889. New procedure for the melting-point determination of macromolecular substances. F. Rybníček (Výzkumný ústav pro využití plastických hmot, Gottwaldov, Czechoslovakia). *Chem. Listy*, 1934, 48 (10), 1675-1676.---A simply constructed apparatus, in which the sample and the thermometer are directly immersed in mercury contained inside a glass-tube reservoir, is described and illustrated. It is especially suitable for determining the melting- or softening-point of macromolecular compounds. The results are somewhat higher than those obtained by current methods. G. GLASER

PM

RYBNIKAR, F.

4

✓ Viscometry of polyamides. František Rybníkář (Výzk.
umny ústav plastických hmot, Gottwaldov, Czech.)
Chem. Listy 49, 1442-7(1955).—Polyamides dissolved in a
cresol-benzene mixt. were fractionated by pptg. with
ligroine (b.p. above 100°). The Huggins equation (C.A.
37, 5900¹) was valid for both fractionated and unfraction-
ated samples of various types of polyamides; the value of
the const. $K = 0.335$ is recommended for use up to an in-
trinsic viscosity of $[\eta] = 10$. To characterize the mol. wt.
of polyamides the use is proposed of the value $[\eta]$ calcd. from
only one viscosity measurement according to the relation
 $[\eta] = (\sqrt{1 + 1.24\eta_{sp}} - 1)/0.67$ c. E. Brdós

Rybníkar, F.

A new procedure for determining the melting point of macromolecular compounds. F. Rybníkar (Výzkumný ústav plastických hmot, Gottwaldovo záměstí, Chem. Listy 48, 1575-6 (1964)). — A special m.p. tube is designed for detg. the m.p. of macromol. substances immersed under the surface of Hg. The m.ps. detd. in this way are higher (by 10-20°) than by those obtained by the usual method because the substance is not in contact with air.

M. Hudlický

RYBNIKOFF, W. A.

COMMON ELEMENTS	<p style="text-align: center;">PROCESSES AND PROPERTIES INDEX</p> <p>CS</p> <p>HIGH GROG REFRACTORIES WITH MULLITE BOND. W. A. Rybnikoff and V. P. Alimova (<i>Keram. i Steklo</i>, 14, 12, 1938). In ordinary refractory materials the grog grains and the clay bond have different porosities, and this causes uneven wear and is responsible for "stones" in glass. Experiments were therefore made with a bond corresponding to mullite ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$). A clay containing 40% Al_2O_3 was mixed in the proper proportions with technical alumina (97% Al_2O_3). The clay and alumina were ground separately in a ball mill, passed through a 0.1-mm. sieve, and then mixed dry. The grog was made from the same clay, fired at $1,350^\circ$, and passed through a 0.75-mm. sieve. Grog and bond, in the proportions of 80:20, 70:30, and 60:40, were dry mixed, moistened, and screened. Specimens 38 mm. diameter and 50 mm. high were made under a pressure of 400 kg./cm². and fired at $1,500^\circ$, $1,550^\circ$, and $1,650^\circ$. The firing shrinkage was high (4.5-7.6%) and increased with rising firing temperature and increasing bond content. The apparent porosity of bodies fired to $1,500^\circ$ and $1,550^\circ$ was 12.7-5.9%; it decreased with increasing mullite formation, and bodies fired to $1,650^\circ$ had a porosity of 0.26-0.47%. Gas permeability of all the bodies was low. Cold crushing strength was 3,000 kg./cm². Commencement of softening (2 kg./cm²) was at $1,560^\circ$-$1,650^\circ$. The higher fired specimens showed little spalling resistance, while the body fired at $1,500^\circ$ withstood fifty quenchings. Good resistance to soda attack was obtained. Mullite formation and size of mullite crystals increased with rising firing temperature.</p>
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RYBNIKOFF, W. A.

HIGH GROC REFRACTORIES WITH MULLITE BOND.--- W. A. Rybnikoff and P. P. Alimova (Keram. i Steklo, 14, 12, 1938). In ordinary refractory materials the grog grains and the clay bond have different porosities, and this causes uneven wear and is responsible for "stones" in glass. Experiments were therefore made with a bond corresponding to mullite ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$). A clay containing 40% Al_2O_3 was mixed in the proper proportions with technical alumina (97% Al_2O_3). The clay and alumina were ground separately in a ball mill, passed through a 0.1-mm sieve, and then mixed dry. The grog was made from the same clay, fired at $1,350^\circ$, and passed through a 0.75-mm sieve. Grog and bond, in the proportions of 80:20, 70:30, and 60:40, were dry mixed, moistened, and screened. Specimens 38mm. diameter and 50 mm. high were made under a pressure of 400 kg./cm², and fired at $1,500^\circ$, $1,550^\circ$, and $1,650^\circ$. The firing shrinkage was high (4.5-7.6%) and increased with rising firing temperature and increasing bond content. The apparent porosity of bodies fired to $1,500^\circ$ and $1,550^\circ$ was 12.7-5.9%; it decreased with increasing mullite formation, and bodies fired to $1,650^\circ$ had a porosity of 0.26-0.47%. Gas permeability of all the bodies was low. Cold crushing strength was 3,000 kg./cm². Commencement of softening (2kg./cm²) was at $1,560^\circ$ - $1,650^\circ$. The higher fired specimens showed little spalling resistance, while the body fired at $1,500^\circ$ withstood fifty quenchings. Good resistance to soda attack was obtained. Mullite formation and size of mullite crystals increased with rising firing temperature.

RYBNIKOV, A.

On the Table Mountain. Vokrug sveta no.12:10-11 D '55. (MLRA 9:4)
(Table Mountain (South Africa))

RYBNIKOV, A., nauchnyy sotrudnik.

In the region of the fifteenth. Vokrug sveta no.2:27-29 P '55.
(MIRA 8:4)

1. Kitoboynaya flotiliya "Slava".
(Whaling)

~~RYBNIKOV, A.~~
RYBNIKOV, A.

8.3-45
✓ Rybnikov, A. Aisbergi Antarkiki. [Antarctic Icebergs.] Vokrug Suda, Moscow, No. 511,311.17(99) 1
1:17, Jan. 1954. DLC—Characteristic features of Antarctic icebergs, exceeding by their number, size and longevity the northern icebergs, are described and discussed by a member of the Soviet whaling flotilla "Slava" on ground of personal observations made during the whaling season 1952 in Antarctic seas. The most frequently encountered icebergs are of the tabular type, with only $\frac{1}{3}$ of the total height rising above the sea surface. Thus, on March 8, 1952 one of the whalers observed a grounded iceberg rising 50 m above the sea near Soviet Island; the measured sea depth at that spot was 190 m. Author discusses further the manner of gradual thawing and disintegration of the icebergs, the various shapes they acquire during that period and the danger they present to ships. Subject Headings: 1. Antarctic icebergs 2. Icebergs 3. Antarctic.—A.M.P.

LAGUTIN, B.L.; RYBNIKOV, A.A.

Preparation of glass for the bathythermograph. Meteor. i gidrol.
no.1:52-53 Ja '56. (MIRA 9:6)
(Bathythermograph)

AUTHORS: Kirillov, I. F., Rybnikov, A. A. SOV/50-58-8-5/18

TITLE: 10 Years Scientific Work of the State Oceanographical Institute on the Whale-Fishing Fleet "Slava" in the Antarctic (Desyat' let nauchnoy raboty Gosudarstvennogo okeanograficheskogo instituta na kitoboynoy flotilii "Slava" v Antarktide)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 8, pp. 28-29 (USSR)

ABSTRACT: The fleet mentioned in the title set sail for the first time in 1946. The complicated weather conditions of the whale-fishery regions of the Antarctic beside a great quantity of icebergs entail dangers. The success of whale-fishery depends on many conditions. Therefore it was necessary to investigate systematically the hydrometeorological conditions of the region. For this purpose a group of scientists began to work on board of the "Slava" already during the second voyage. The Gosudarstvennyy okeanograficheskiy institut (State Oceanographical Institute) took part in it to a considerable extent - it sent its assistants to the group and still takes part in the investigation of the Antarctic Seas. These assistants were the following: the two authors as well as Yu. V. Makerov, V. S.

Card 1/3

SOV/50-58-8-5/18

10 Years Scientific Work of the State Oceanographical Institute on the
Whale-Fishing Fleet "Slava" in the Antarctic

Nazarov, and G. M. Tauber. During the first years the observations were made on the flagship "Slava". Since 1948 the ship "Slava-15" has been commanded to do scientific work and to go whaling. It had, however, to do other work as well, and this rendered the hydrological investigations rather difficult. In spite of this rich material concerning the hydrology and meteorology of the Atlantic and the whale-fishery regions of the Antarctic was collected. Results were obtained on the distribution of sea-ice and icebergs, on the temperature, transparency, and color of the water. Finally important collections of zoo-plankton were made and whales were marked. The commanders of the fleet were regularly supplied with hydrometeorological characteristics of the whale-fishery regions. Ice maps were designed. The first monograph in two parts (Refs 1, 2), and the material with which the mentioned institute was regularly supplied were printed. New whale-fishery regions are sought by means of modern methods. This implies the distribution of the zoo-plankton in connection with the transparency of the water, content of phosphates, oxygen, and salt. The infrasonic waves which drive away whales are investigated. There are

Card 2/3

SOV/50-58-8-5/18

10 Years Scientific Work of the State Oceanographical Institute on the
Whale-Fishing Fleet "Slava" in the Antarctic.

2 references, which are Soviet.

Card 3/3

RYBNIKOV, A.A.; KIRILLOV, I.F.

Marked whales. Nauka i zhizn' 25 no.9:66 S '58. (MIRA 11:10)

1. Sotrudniki nauchnoy gruppy kitoboynoy flotilii "Slava."
(Whales)

PHASE I BOOK EXPLOITATION SOV/4737

Ivanov, A.P., I.F. Kirillov, A.A. Rybnikov, and K.M. Sirotov

Gidrometeorologicheskiye nablyudeniya na kitoboynom sudne "Slava-15" Antarkticheskoy kitoboynoy flotilii v 1955-58 gg. i glubokovodnyye gidrologicheskiye nablyudeniya v 1950-51 i 1953-58 gg. (Hydrometeorological Observations Made on Board the Whaler "Slava-15" of the Antarctic Whaling Fleet, 1955-58, and Deep-Sea Hydrological Observations, 1950-51 and 1953-58) Moscow, Gidrometeoizdat (Otd-niye), 1960. 319 p. (Series: Moscow. Gosudarstvennyy okeanograficheskiy institut. Trudy, vyp. 58) 650 copies printed.

Sponsoring Agencies: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR; Gosudarstvennyy okeanograficheskiy institut.

Ed. (Title page): V.S. Nazarov; Ed. (Inside book): N.I. Sorokina; Tech. Ed.: I.M. Zarkh.

PURPOSE: The book is intended for members of the whaling industry and for navigators. It will also be useful to meteorologists and hydrologists.

COVERAGE: This issue of the Transactions of the Moscow State Oceanographic Institute presents the results of hydrometeorological and glaciological observations
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Hydrometeorological Observations (Cont.)

SOV/4737

conducted in Antarctic waters by the scientific exploration vessel "Slava-15" in 1955-58. During the first two seasons observations were conducted in the Atlantic section of the Antarctic waters. Observations made during the last voyage were extended over Antarctic waters from long. 42° W. to long. 162° E., i.e., over the southern part of the Atlantic and Indian oceans. This issue of the Transactions contains some general conclusions of value in the field of hydrology, meteorology and wind-generated sea-swell studies. Tables presenting the results of deep-sea observations made by the "Slava-15" from 1950 through 1958 are included. The scientific hydrometeorological group on the vessel consisted of the following: A.F. Ivanov, I.F. Kirillov, V.L. Lebedev, and A.A. Rybnikov. Meteorological and hydrological observational data from the expedition were processed at the State Oceanographic Institute by the same scientists. Chapter IV was written by K.M. Sirotoy. There are 13 references: 11 Soviet, 1 German, and 1 English.

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KIRILLOV, I. F., nauchnyy sotrudnik; RYBNIKOV, A.A., nauchnyy sotrudnik;
NAZAROV, V.S., red.; TARKHUNOVA, V.I., red.; ZEMTSOVA, T.Ye.,
tekhn.red.

[Hydrometeorological observations on research and scouting ships
of the "Slava" Antarctic Whaling Fleet in 1958-1959] Gidrometeoro-
logicheskie nabliudeniia na nauchno-poiskovykh sudakh AKF "Slava"
v 1958-1959 g. Moskva, Gidrometeor. izd-vo (otdelenie), 1961.
77 p. (Moscow. Gosudarstvennyi okeanograficheskii institut. Trudy,
no.60) (MIRA 14:7)

1. Gosudarstvennyi okeanograficheskii institut.
(Antarctic regions--Meteorology--Observations)
(Antarctic regions--Oceanographic research)

RYBNIKOV, A.A.

Temperature of Antarctic surface waters in the whaling regions of
Antarctica. Okeanologiya 1 no.5:825-834 '61. (MIRA 15:3)

1. Gosudarstvennyy okeanograficheskiy institut.
(Antarctic regions--Ocean temperature) (Antarctic regions--Whales)

RYBNIKOV, A.A.

Hydrometeorological conditions in whaling grounds of Antarctica
and their effect on the distribution of whales. Trudy GOIN
no.73:3-65 '63. (MIRA 16:7)
(Antarctic regions—Hydrometeorology)
(Whaling)

KIRILLOV, I.F.; RYBNIKOV, A.A.

The roaring forties. Priroda 52 no.4:42-47 '63. (MIRA 16:4)

1. Gosudarstvennyy okeanograficheskiy institut, Moskva.
(Antarctic regions)

RYBNIKOV, A. G.

36977. BRANDORF, G. S. i RYBNIKOV, A. C. Sluchay Gemorragicheskogo Entsefalita, Lechennyi Endolyumbal'nyim Vvedeniyem Penitsillina. Uchen. Zapiski (L'vovsk. Nauch.-issled. Kozhno-venerol. In-t), t. II, 1949, c. 107-11

S0: Letopis' Zhurnal'nykh Statey, Vol 50, Moskva, 1949

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S/055/59/000/05/018/020

AUTHOR: Rybnikov, A. K.

TITLE: The Immersion of a 3-dimensional Space of Affine Connection
With Torsion in a 7-dimensional Affine Space \

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki,
mekhaniki, astronomii, fiziki, khimii, 1959, No. 5,
pp. 205-218

TEXT: Theorem: Every three-dimensional space of affine connection
with torsion whose tensor of curvature does not identically vanish
can be embedded into a seven-dimensional affine space. The arbitrariness
of the immersion is determined by four arbitrary functions of three
arguments.

The author thanks G. F. Laptev for assistance.

There are 3 references: 2 Soviet and 1 French.

SUBMITTED: January 20, 1959

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AUTHOR: Rybnikov, A.K.

TITLE: On the Imbedding of an Affinely Connected Space With Torsion in an Affine Space

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I, matematika, mekhanika, 1960, No.1, pp.3-15

TEXT: The author improves the result of Galvani (Ref.2) and proves the Theorem: Every n-dimensional space of affine connection with torsion can be imbedded in an N-dimensional affine space if for an odd n it holds

$N \geq \frac{n^2+3n-2}{2}$ and for an even n it holds $N \geq \frac{n^2+4n-4}{2}$. Here the arbitrariness wherewith the imbedding is carried out is determined by $(N - \frac{n^2+3n-2}{2})(2n+1) + \frac{3n^2-n^2-2}{2}$ arbitrary functions of n arguments for odd n and by

$(N - \frac{n^2+4n-4}{2})(2n+1) + \frac{5n^2-4n-4}{2}$ functions for even n.

The author thanks Professor G.F.Laptev for the leading of the work. There are 2 references; 1 Soviet and 1 French.

ASSOCIATION: Kafedra differentsial'noy geometrii (Department of Differential Geometry)

SUBMITTED: April 8, 1959

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RYBNIKOV, A.K.

Symmetric spaces of affine connectivity of the first class. Dokl.
AN SSSR 140 no.1:59-61 S-O '61. (MIRA 14:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom P.S.Aleksandrovym.
(Spaces, Generalized)